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EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT

PAPER NUMBER

2611

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



### **DETAILED ACTION**

1. This office action is in response to remarks/amendment filed 2/3/2009.
2. Applicant's amendment of claims 1, 8 is acknowledged and accepted, objection therefore, is withdrawn.

### ***Response to Arguments***

3. Applicant's remarks/amendment with respect to claims 1-15 have been fully considered. However, upon further review and consideration, allowance of claims 1, 8 is withdrawn in view of the new ground(s) of rejection. The rejection follows.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 8, 15 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nicolai et al (USP 4,188,580) in view of Hirano et al (USP 6,111,532).

Regarding claim 1, Nicolai discloses a pulse pattern generator comprising:  
a pulse generating unit (10) which generates a pulse signal formed in a step-like wave (generates a sequence of pulses x bits long), in which at least one of rise and fall of a

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signal (bit pattern) having a predetermined change amplitude value is changed in a step-like manner in a predetermined bit string (predetermined user selectable causes a signal pattern of pulses to be generated and the rise and fall is implicitly implied with the bit pattern) (col. 4, lines 49-68; col. 5, lines 1-16). Nicolai does not disclose a low pass filter to filter pulse signal and an amplitude value setting unit (amplifier) to adjust an amplitude in order to set an eye waveform at a predetermined eye closure. However, Hirano discloses low-pass filter which smoothes out the signal effects in the pulse signal formed in the step-like wave (signal pattern), the pulse signal being generated by the pulse generating unit, (col. 2, lines 15-23); and an amplitude-value setting unit (amplitude adjusting device) which adjusts an amplitude value of a step-like wave that forms the pulse signal based on the amplitude value, in order to set an eye waveform at a predetermined eye closure when an output from the low pass filter is eye-patterned, wherein the pulse signal having a desired pulse pattern with the predetermined eye closure (area defined by the waveform) set by the amplitude-value setting unit is configured as output from low pass filter (col. 2, lines 15-37; col. 3, lines 55-65). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a low pass filter to filter out any deleterious effects in the output signal and an amplitude setting device to set adjust the amplitude or gain of signal as taught by Hirano in the circuit of Nicolai because it can allow signal to be filtered properly and adjusted to a desired pattern effectively. It is noted that the eye pattern is implicitly implied because signal is filtered and amplified and adjusted to desired shape of data signal in response to any error or jitter signal in a

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manner such that an area defined by a waveform of pulse signal output is uniform to reproduce signal. It is also noted by the examiner that IEEE standard (P802 3ae/D5) establishes a Standard in which a test with the pulse signal having a defined eye closure is performed as a stress test (see applicant's admitted background art, page 1, 0009).

Regarding claim 8, the steps claimed as apparatus is nothing more than restating the function of the specific components of the method as claimed above and therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to represent the claim in an alternate way so as to realize steps for the apparatus as claimed, considering the aforementioned rejection for the method claim 1.

Regarding claim 15, Nicolai and Hirano disclose all limitations of the claim. Nicolai further discloses that communication can be performed with carrier frequency signal (col. 1, section 13-40).

### ***Allowable Subject Matter***

6. Claims 2-7, 9-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutbuddin Ghulamali whose telephone number is (571)-272-3014. The examiner can normally be reached on Monday-Friday, 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QG.  
April 21, 2009.

/Chieh M Fan/  
Supervisory Patent Examiner, Art Unit 2611